

ABSTRACT OF DISCLOSURE

A gateway comprising a first port connected to a network and a second port connected to a target node and being employed for a data stream between the network and applications of the target node, the gateway further comprising: a storage unit to store an IP address of the target node; an MAC address converter to set an MAC address of the target node as an MAC address of the first port; a controller to set an IP address of the second port based on an IP address of the target node, and to read the MAC address of the target node through the second port and set the IP address of the target node as an IP address of the first port; and a router to set a transmission route and transmit data to the IP address of the target node without a local loop back process, in response to the IP address of the target node and the IP address of the first port being the same.